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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/257,223	02/25/1999	LESLIE DEREK HUMPHREY	476-1733	1908
7590	06/18/2004		EXAMINER	
BARNES & THORNBURG SWEENEY & OHLSON P O BOX 2786 CHICAGO, IL 60690-2786			GEORGE, KEITH M.	
			ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/257,223	HUMPHREY, LESLIE DEREK
	Examiner Keith M. George	Art Unit 2663

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 07 April 2004.
 2a) This action is **FINAL**. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1,2,4-7 and 12-22 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1,2,4-7 and 12-22 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on 17 October 2002 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
 Paper No(s)/Mail Date _____.

4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____.
 5) Notice of Informal Patent Application (PTO-152)
 6) Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 4 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. Claim 4 recites the limitation "A digital communication system as claimed in claim 14" in line 1 of the claim. There is insufficient antecedent basis for this limitation in the claim.

Claim 14 is a dependent claim that is directed towards the method as claimed in claim 7.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 7, 12, 18, 21 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Westberg, U.S. Patent 6,041,054, hereinafter Westberg in view of Saussy, U.S. Patent 5,936,963, hereinafter Saussy. Westberg teaches that bandwidth utilization and transmission efficiency associated with the point-to-point transportation of Internet Protocol data packets in a network environment is improved by employing asynchronous transfer mode (ATM) adaptation

layer two (AAL2) minicells as a bearer (abstract). Westberg goes on to teach a method of header compression where if the source/destination/connection/flow information associated with the session context/connection ID has been previously stored in the look-up table, the compression algorithm, in the compressor located at the sending point (first management system), need only copy the corresponding address, or a subportion thereof, into the CID field of the AAL2 minicell header (engineering operations channel) before the AAL2 minicell is transmitted (sequence of AAL2 minicells) from the sending point (central station) to the receiving point (subscriber terminal) (column 6, lines 50-57). At the receiving point, the decompression algorithm analyzes the CID field and retrieves the source/destination/connection/flow information from the look-up table by accessing the look-up table in accordance with the address stored in the CID field (second management system) (column 6, lines 57-62). Westberg teaches all of the above with the possible exception that the point to point connection is a digital subscriber line. Saussy clearly teaches transferring data over an ADSL link using the ATM data format. At the time the invention was made, it would have been obvious to one of ordinary skill in the art that the AAL2 minicells taught by Westberg could be used in an ATM data format over ADSL as taught by Saussy. One of ordinary skill in the art would have been motivated to use the AAL2 mini-cells in the ADSL network since AAL2 minicells provide improved transmission efficiency (Westberg, abstract).

6. Referring to claim 14 and 15, Westberg and Saussy teach the method described in reference to claim 7 above and Westberg also teaches in figure 9 that IP Data can be contained in the AAL2 minicell and that the minicell is frame and byte oriented. One of ordinary skill in the art would have known that packet voice traffic is a type of IP Data.

7. Claims 2, 6, 13, 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Westberg and Saussy as applied to claims 1, 7 and 12 above, and further in view of Deng, U.S. Patent 6,243,394, hereinafter Deng.

8. Referring to claims 2, 6 and 13, Westberg and Saussy teach the apparatus described in reference to claims 1, 7 and 12 above with the possible exception of the use of modems to connect the two systems, a multiplexer or packet transaction means. Deng teaches a digital communication system comprising an ADSL Modem, Data Bus/Multiplexer and Switching Port Controllers (packet transaction means) in figures 4 and 5. At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to utilize the minicells as taught by Westberg and Saussy over the network taught by Deng. One of ordinary skill in the art would have been motivated to do this because Westberg and Saussy clearly teach the use of AAL2 minicells in an ADSL network and Deng teaches the transmission of data using an ADSL channel and an apparatus for accessing an ADSL channel (column 1, lines 4-7).

9. Referring to claims 19 and 20, Westberg has clearly taught in reference to claims 1, 2, 6, 7, 12 and 13 that the AAL minicells in use are AAL2 minicells (abstract).

10. Referring to claim 4 and assuming that claim 4 should depend from claim 2 as it has in previous amendments, Westberg, Saussy and Deng teach the system described in reference to claim 2 above and Deng also teaches a WAN protocol converter in figure 5 that can convert the protocol of data packets received from the wide area network from WAN protocols, such as frame relay or ATM protocol (column 7, lines 57-60). At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to connect the network of

Westberg, Saussy and Deng to an ATM network to provide WAN connectivity to the devices on the network.

11. Referring to claim 5, Westberg, Saussy and Deng teach the system described in reference to claim 4 above and Deng also teaches a twisted conductor pair to connect the devices as shown in figures 4 and 5. At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to connect the two devices in the communication network of Westberg, Saussy and Deng with a twisted conductor pair as taught by Deng since an ADSL modem transmits and receives digital data packets on twisted pair (Deng, column 5, lines 2-3).

12. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Westberg and Saussy as applied to claim 15 above, and further in view of Czerwieg et al., U.S. Patent 6,314,102, hereinafter Czerwieg. Westberg and Saussy teach the method as described in reference to claim 15 above with the possible exception of scrambling the data over the line. Czerwieg teaches an ATM system includes a scrambler before a Reed Solomon encoder and a descrambler after the Reed Solomon decoder (column 18, lines 4-6). At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to add the scrambler/descrambler of Czerwieg to the method of Westberg and Saussy in order to randomize the data (Czerwieg, column 18, lines 4-6).

13. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Westberg, Saussy and Czerwieg as applied to claim 16 above, and further in view of Lamport et al., U.S. Patent 5,138,615, hereinafter Lamport. Westberg, Saussy and Czerwieg teach the method described in reference to claim 16 above with the possible exception of performing synchronization during a period of null data transmission. Lamport teaches packet flow control for a local area network

where if there is no data which needs to be sent between two hosts, then synchronization bytes are sent, and the synchronization bytes are simply null data (column 9, lines 65-68). At the time the invention was made it would have been obvious to a person of ordinary skill in the art to use the packet flow control method of Lamport to send synchronization bytes as null data since they can instruct the receiver that no data is being sent (Lamport, column 10, lines 31-34).

Response to Arguments

14. Applicant's arguments with respect to claims 1, 2, 4-7, 12 and 13 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

15. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Keith M. George whose telephone number is 703-305-6531. The examiner can normally be reached on M-Th 7:00-4:30, alternate F 7:00-3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau T. Nguyen can be reached on 703-308-5340. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Keith M. George
15 June 2004



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